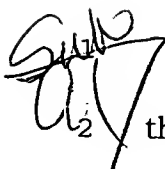


What is claimed is:

 1. A method of processing a message comprised of a plurality of layers,  
2 the method comprising the steps of:

3 linking a plurality of layers; and

4 encoding each layer of the plurality of layers after the step of linking is  
5 complete.

1 2. The method according to claim 1, wherein the step of linking  
2 comprises the steps of:

3 determining an address of a first layer context;

4 passing the address of the first layer context to a second layer, which is  
5 adjacent to the first layer; and

6 setting a second layer context address equal to the address of the first  
7 layer, whereby the contexts of the first and second layers are linked.

1 3. The method according to claim 2, further comprising the steps of:

2 passing the address of the linked contexts of the first and second layers  
3 to an adjacent subsequent layer;

4 setting a context of the adjacent subsequent layer equal to the address  
5 of the linked context of the first and second layers, whereby the linked context  
6 and the context to the adjacent subsequent layer are thereby linked; and

7 repeating the steps of linking layer contexts until each layer in the  
8 plurality of layer are linked.

1 4. The method according to claim 3, wherein each layer context  
2 comprises variables and methods.

al 1 5. The method according to claim 4, wherein the variables comprise at  
2 least header and trailer field values, buffer positions and addresses to other  
3 contexts.

1 6. The method according to claim 4, wherein the methods comprise at  
2 least methods for encoding and decoding, one method decoding being a  
3 method for furnishing a context of a message.

1 7. The method according to claim 6, wherein the method for encoding  
2 comprises a method for computing message body dependent fields to include  
3 message length and CRC fields.

1 8. The method according to claim 1, wherein the step of encoding  
2 comprises the steps of:

3 incrementing a current buffer position by a header length of a first layer  
4 in the linked plurality of layers;

5        setting the current buffer position equal to the buffer position obtained  
6        by incrementing the current buffer position by the header length of the first  
7        layer; and  
8        repeating the incrementing and setting steps for each of the remaining  
9        linked layers.

1        9. The method according to claim 8, further comprising the steps of:  
2        calculating an aggregate value for layers having variable length headers;  
3        and  
4        setting the aggregate value equal to the header length in said  
5        incrementing step.

1        10. The method according to claim 8, further comprising the step of:  
2        terminating buffer incrementing upon detection of an end-of-layer  
3        indicator.

1        11. The method according to claim 8, further comprising the steps of:  
2        moving header field data of each layer in the buffer into a message  
3        stream; and  
4        moving trailer field data of each layer into the message stream,  
5        wherein the movement of the header field data and trailer field data  
6        results in a formatted message stream having disposed therein encoded data  
7        obtained from the linked plurality of layers.

1 12. The method according to claim 11, wherein the trailer field data  
2 associated with each layer comprises CRC/FCS data.

1 13. The method according to claim 1, wherein the step of linking  
2 entails linking layers comprising unformatted layer values.

1 14. The method according to claim 1, wherein the encoding step  
2 encodes each layer of the linked plurality of layers into a single buffer.

1 15. A method for processing a formatted layered message for  
2 transmission over a communication network, the formatted layered message  
3 having encoded data, the processing of the formatted layered message  
4 comprising the steps of:

5 combining unformatted elements to link a plurality of layers; and  
6 using a method on the unformatted elements to form the formatted  
7 layered message.